

PCT/GB 03/03376

IPC 7	C07D237/24	C07D237/08	C07D237/20	C07D237/14	C07D401/10
	C07D405/10	C07D403/10	C07D403/12	C07D401/12	C07D409/04
	C07D401/04	C07D405/14	C07D409/14	C07D401/14	C07D417/14

B. FIELDS SEARCHED

IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

CHEM ABS Data, EPO-Internal, WPI Data, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02 38568 A (HALLETT DAVID JAMES ;MERCK SHARP & DOHME (GB); RUSSELL MICHAEL GEO) 16 May 2002 (2002-05-16) example 93 claim 13 ----	1,10,11
X	WO 02 22605 A (KNEGTEL RONALD ;BEBBINGTON DAVID (GB); CHARRIER JEAN DAMIEN (GB);) 21 March 2002 (2002-03-21) Table 7, examples VIII-1, VIII-14, VIII-33 ----	1,10
X	EP 0 072 726 A (SANOFI SA) 23 February 1983 (1983-02-23) table I ----	1,10,13
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☒ - Further documents are listed in the continuation of box C:

X Patent family members are listed in annex.

° Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- *G* document member of the same patent family

Date of the actual completion of the international search

16 October 2003

Date of mailing of the international search report

03/11/2003

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07D403/04 A61K31/4965 A61K31/497

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WERMUTH, CAMILLE GEORGES ET AL: "Synthesis and structure-activity relationships of a series of aminopyridazine derivatives of gamma.-aminobutyric acid acting as selective GABA-A antagonists" JOURNAL OF MEDICINAL CHEMISTRY (1987), 30(2), 239-49, XP002257939 Scheme I, compound III; Scheme II, compound 9a</p> <p style="text-align: center;">--- -/--</p>	1

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

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INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	AURICCHIO, SERGIO ET AL: "New cleavage of the azirine ring by single electron transfer: the synthesis of 2H-imidazoles, pyridazines and pyrrolines" EUROPEAN JOURNAL OF ORGANIC CHEMISTRY (2001), (6), 1183-1187, XP002257940 examples 3A-3C	1
X	RIVAL, YVELINE ET AL: "5-HT3 Antagonists Derived from Aminopyridazine-type Muscarinic M1 Agonist" JOURNAL OF MEDICINAL CHEMISTRY (1998), 41(3), 311-317, XP002257941 scheme 1	1,10
X	SOUTH, MICHAEL S. ET AL: "Synthesis and Reactions of Haloazodienes. A New and General Synthesis of Substituted Pyridazines" JOURNAL OF ORGANIC CHEMISTRY (1996), 61(25), 8921-8934, XP002257942 examples 9,10; table 1	1
X	BLY, RUTA K. ET AL: "Heterocyclic studies. XIII. The aldol condensation of 2,3-dihydro-5-methy 6-phenyl-4H-1,2diazepin-4-one and rearrangement to a pyridazine" JOURNAL OF ORGANIC CHEMISTRY (1964), 29(8), 2128-35, XP002257943 examples 15A-D	1
X	DATABASE CA 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; ATKINSON, C. M. ET AL: "Triazaphenanthrenes. III. Synthesis of some 9-aryl-2,3,10- triazaphenanthrenes" retrieved from STN Database accession no. 53:67737 XP002257945 abstract & JOURNAL OF THE CHEMICAL SOCIETY, ABSTRACTS (1959) 1-5,	1
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INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE CA 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; SAMSONOV, V. A. ET AL: "Preparation and reactions of pyrroline N-oxides obtained by reaction of isonitroso ketones with enamines" retrieved from STN Database accession no. 126:18740 XP002257946 abstract & KHIMIYA GETEROTSIKLICHESKIKH SOEDINENII (1996), (8), 1055-1061,</p>	1
X	<p>HARRIS, R.L.N. ET AL.: "The effect of C-2-carboxyphenyl Derivatives of Certain Heterocyclic Compounds on Root Geotropism in Cress Seedlings" PESTICIDE SCIENCE, vol. 11, 1980, pages 439-444, XP009019048 example XV</p>	1
X	<p>OLIVER, J.E ET AL.: "Alkylation and Rearrangement of Lithiated 3-Methyl-1,2-benzisoxazoles" JOURNAL OF ORGANIC CHEMISTRY, vol. 54, 1989, pages 4970-4973, XP002257944 table I</p>	1
X	<p>BREUKELMAN, S.P: "Preparation and some Reactions of 4- and 5-Aryl-4,5-dihydropyrazin-3(2H)-ones" J. CHEM. SOC. PERKIN TRANS., 1985, pages 1627-1635, XP009019047 page 1629; example 25</p>	1
X	<p>JOJMA, T. ET AL.: "Pyridazine I. Novel Intramolecular Cycloaddition of 3-Chloro-6-(2-allylphenoxy)pyridazines" CHEMICAL&PHARMACEUTICAL BULLETIN, vol. 20, no. 10, - 1972 pages 2191-2203, XP009019056 page 2195; example IX</p>	1
X	<p>US 4 810 705 A (CHAMBON JEAN-PIERRE ET AL) 7 March 1989 (1989-03-07) examples I-IX</p>	1
A	<p>US 6 255 305 B1 (GUIBLIN ALEXANDER RICHARD ET AL) 3 July 2001 (2001-07-03) column 3, line 4 - line 18 claim 1</p>	1,10,13

INTERNATIONAL SEARCH REPORT

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 13
because they relate to subject matter not required to be searched by this Authority, namely:
see FURTHER INFORMATION sheet PCT/ISA/210
2. ☒ Claims Nos.: 1(partially)
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Although claim 13 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Continuation of Box I.1

Claims Nos.: 13

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy

Continuation of Box I.2

Claims Nos.: 1(partially)

The initial phase of the search revealed a very large number of documents relevant to the issue of novelty. So many documents were retrieved that it is impossible to determine which parts of the claim(s) may be said to define subject-matter for which protection might legitimately be sought (Article 6 PCT). For these reasons, a meaningful search over the whole breadth of the claim(s) is impossible. Consequently, the search has been restricted to compounds of formula I according to present claim 1 for which R1 is always other than hydrogen.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

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